

FURIKAERI

ふりかえり

- Looking back into one's behavior -

EASA FDM Conference'17

Marriott Hotel Cologne, 12th and 13th June 2017

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ALL NIPPON AIRWAYS

Safety Promotion / Flight data monitoring





“It is only with the **heart**
that one can see rightly.
What is essential is invisible
to the eye.”



© Antoine de Saint-Exupéry

The Little Prince,
Antoine de Saint-Exupéry

OUTLINE

- ✈ **Background**
- ✈ **Furikaeri**
- ✈ **Sustainability and Resilience**

ANA Scales of Operation

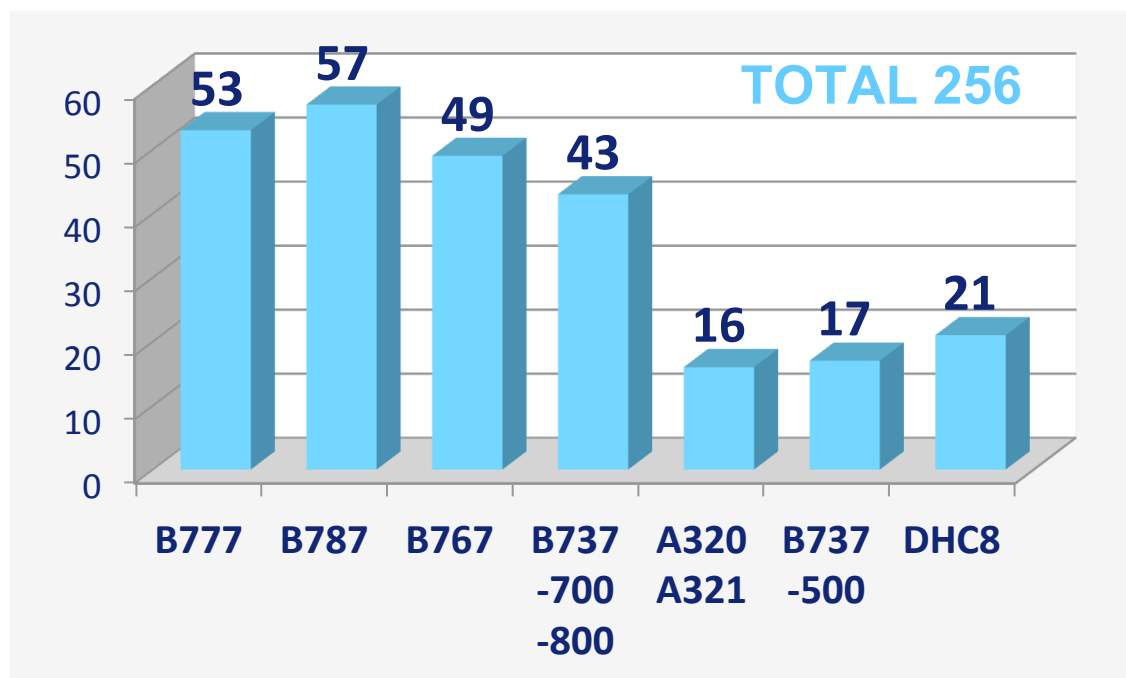
✈ DOMESTIC + INTERNATIONAL FLIGHTS: about **1,000/day**



✈ NUMBER OF ANA GROUP PILOTS: about **3,000**



✈ NUMBER OF AIRCRAFT: **256** (as of May 2017)



Background

✈ **ANA envisions a world where each ANA pilot explores safety and improve his/her skills.**



✈ **Flight data is the key contributor to make this world become reality.**



Background

Around FDM

STRENGTHS

Replacement WQAR
Ground station
FLT animation

THREATS

Black swan events
Less hanger talk
Less analysts



OPPORTUNITIES

Big Data / IOT
Growth market

WEAKNESSES

Lack of timely &
individually feedback
by FDM

Furikaeri - Timely & Individually

AMS
Aviation Mobile Service



1. SIGN IN



2. CONTRACT



3. REQUEST



“ Looking Back at flights via animation videos”

“ Furikaeri” : this tool will provide the flight crew the ability to improve safety by debriefing on their own flights.

[Operating Policy]

- Sharing is only limited to the crew members onboard of the related flight.
- Any use of the videos for the purpose of examination and performance evaluation is strictly prohibited.
- Videos shall not be shared with any third parties.

Furikaeri – Typical specification

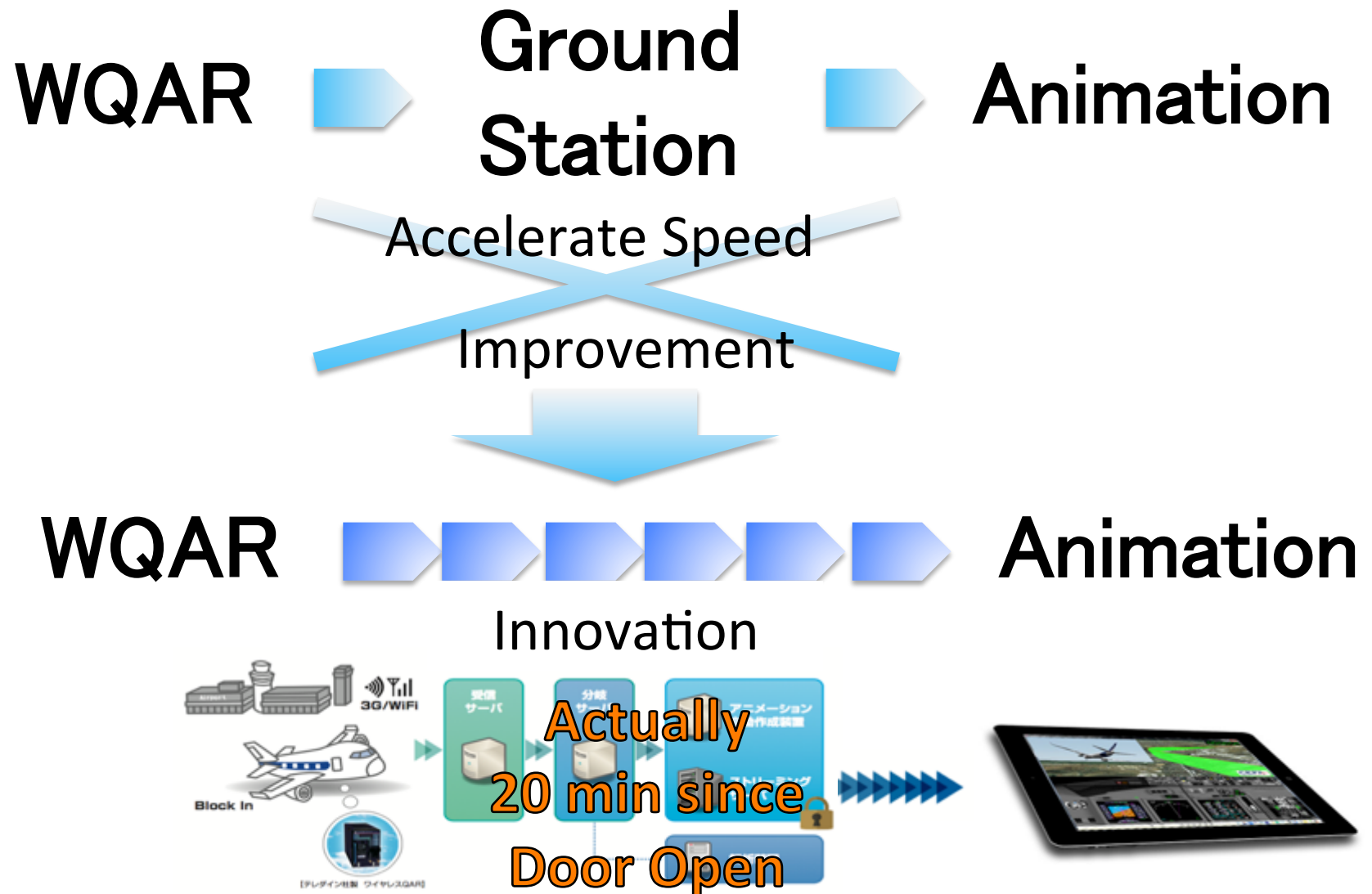


- ✈ Just after passenger door opens, pilots are able to **replay their own landing** (last 5 min ~ LDG roll) within 30 min
- ✈ Each crew is able to **only** review their own flights (information from QAR data, crew schedule and landing time are used to accomplish this)
- ✈ Animation will be **deleted** after one month (default)
- ✈ Usage for evaluation or check is **prohibited**

Furikaeri Demonstration Video

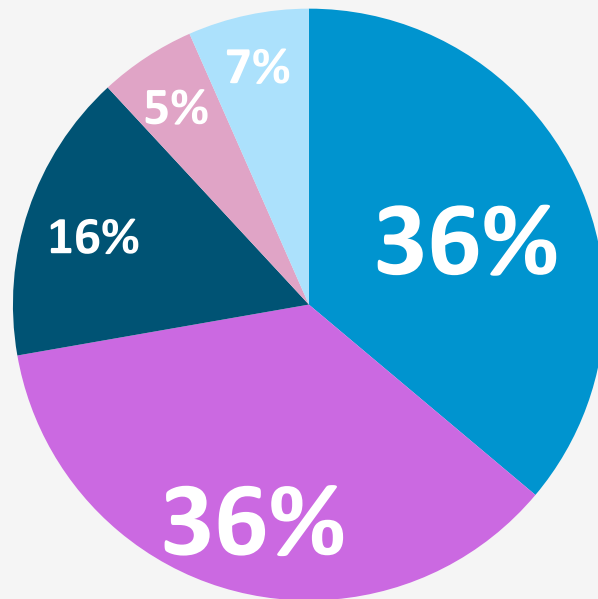


Furikaeri - Key Driver



Satisfaction

Helpful for safety and technique?



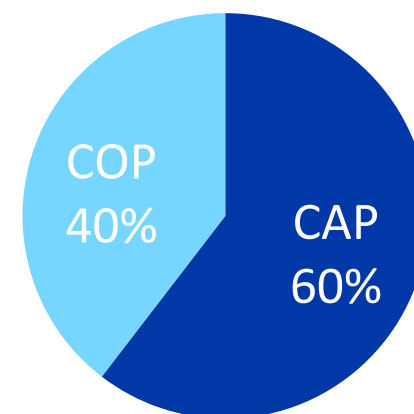
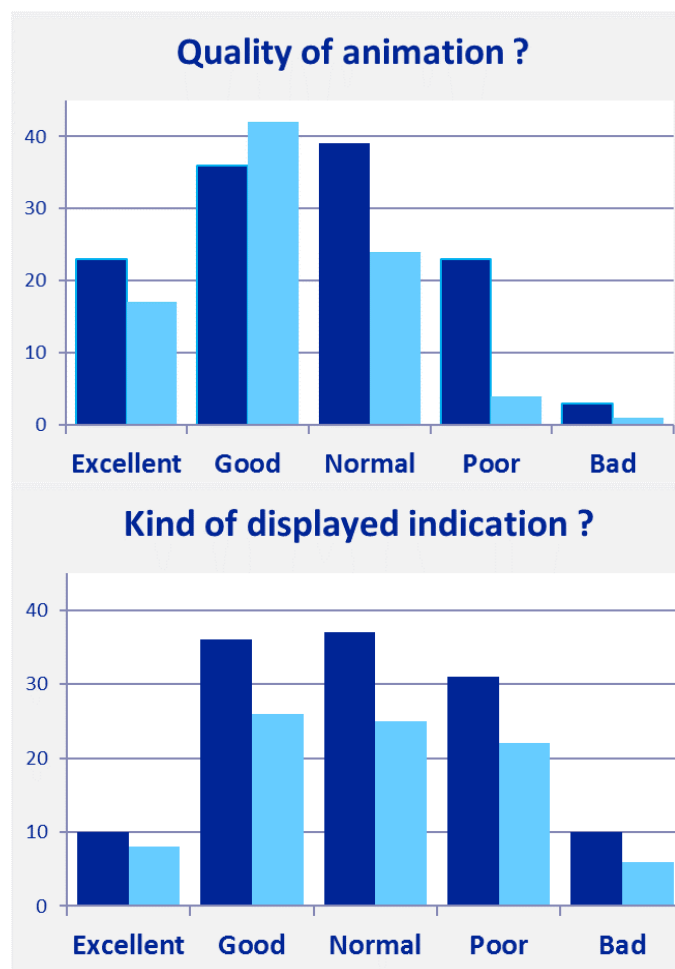
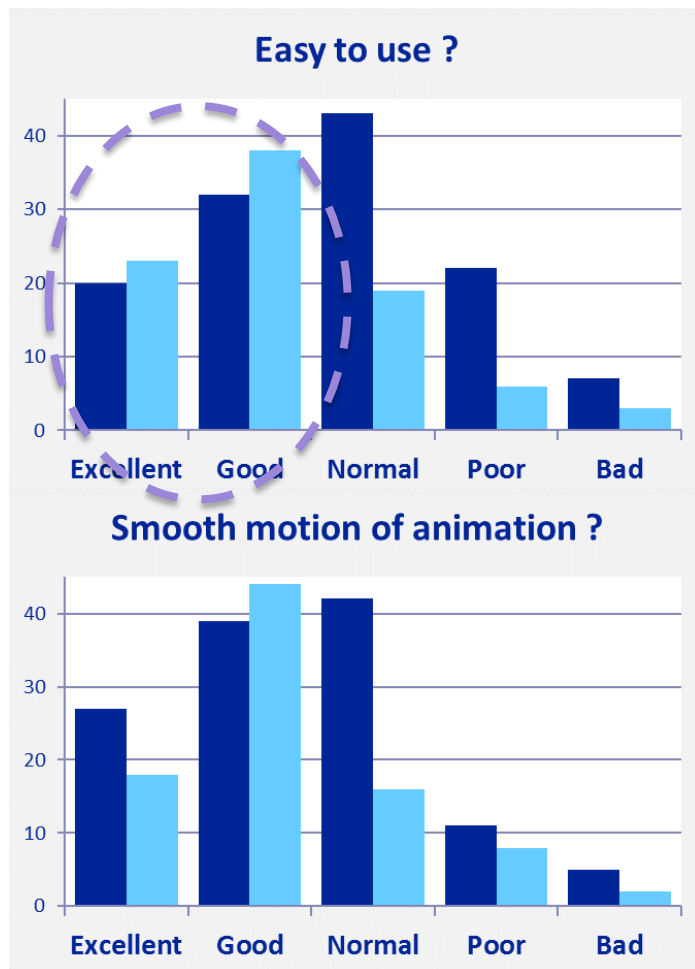
■ Excellent ■ Good ■ Normal ■ Poor ■ Bad

about 300 feedbacks in ANA group

✈ **Over 70%** of pilots agree that it is **helpful** for performance review and safety enhancement

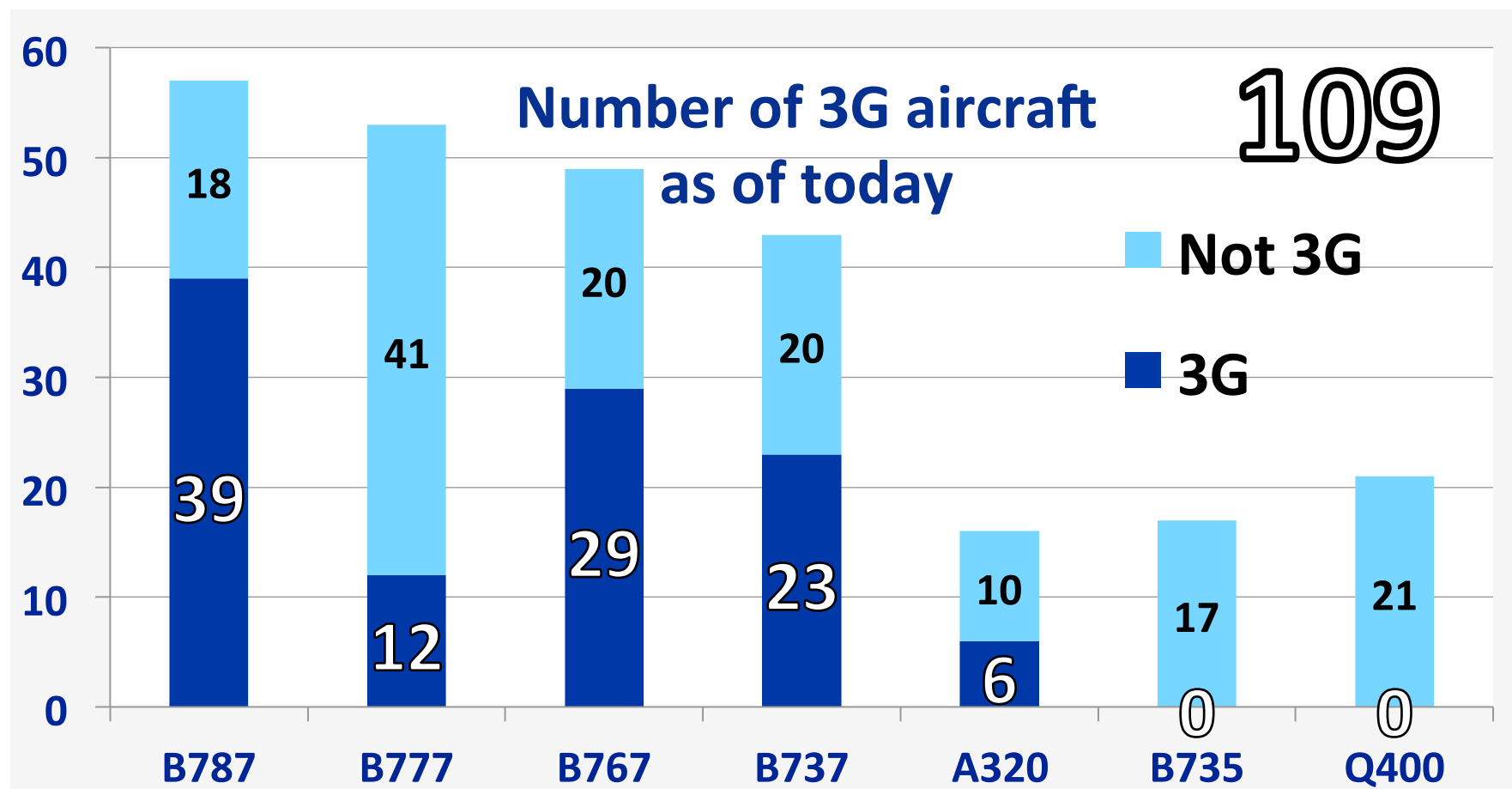


Satisfaction



- ✈ **Copilots** percentages are much higher
- ✈ There is still room for technical improvement

WQAR



✈ WQAR modification will be completed until mid of 2018.

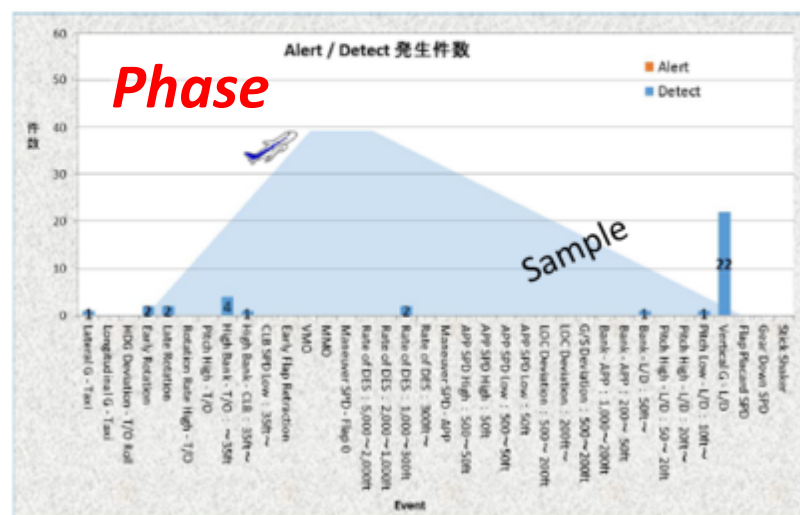
FURIKAERI – Deeply & Individually

FURIKAERI KARTE

DATA SUMMARY

[期間] 2014年4月1日～2015年3月31日
 [機種] B767
 [FDR] T/O:189 L/D:187

① Event発生件数は以下の通りです。



Feedback Alert / Detect level
6 month summary like
 health report on request.

② 空港別Event発生件数の分布は、以下の通りです。



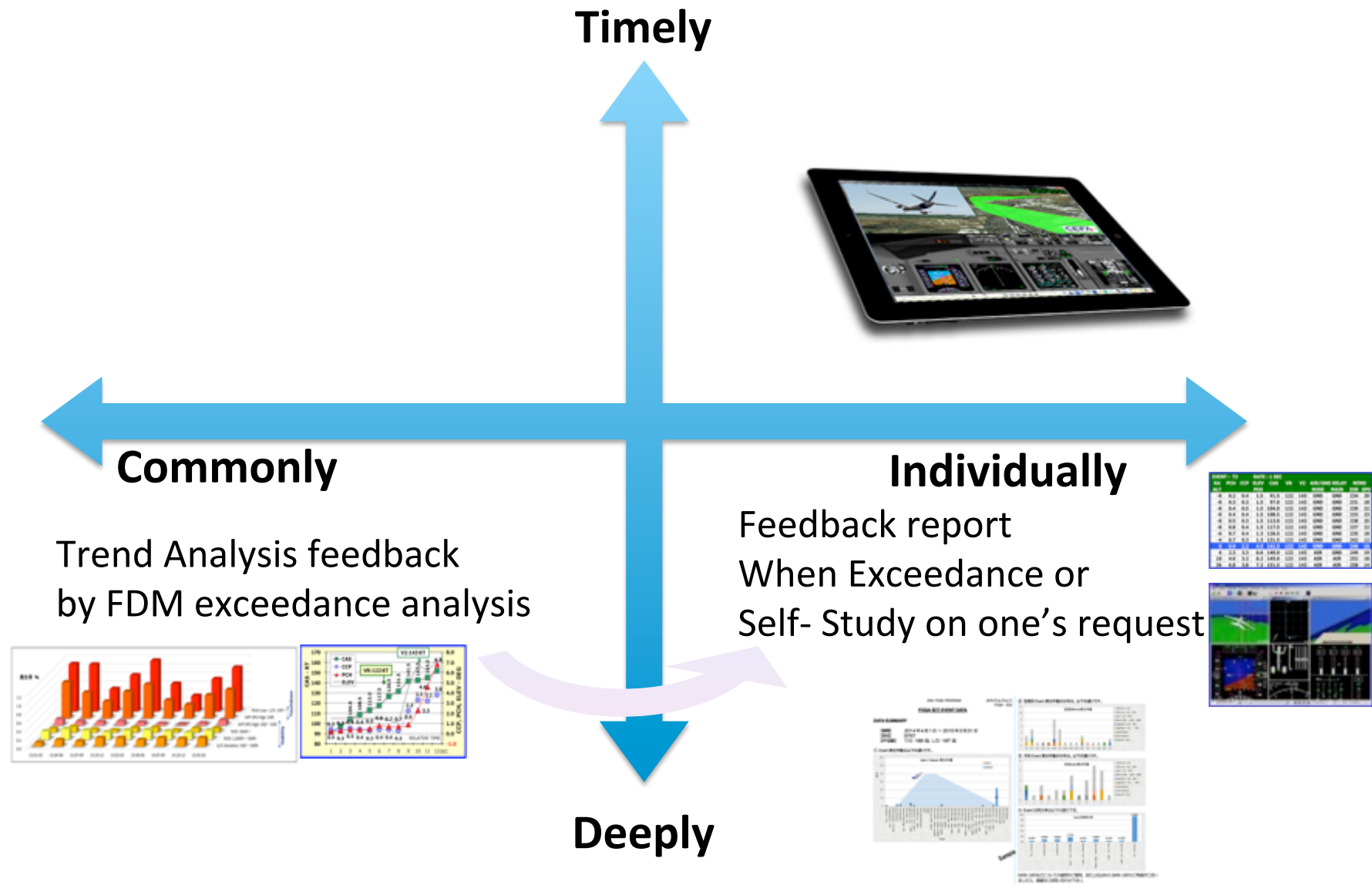
③ 月別Event発生件数の分布は、以下の通りです。



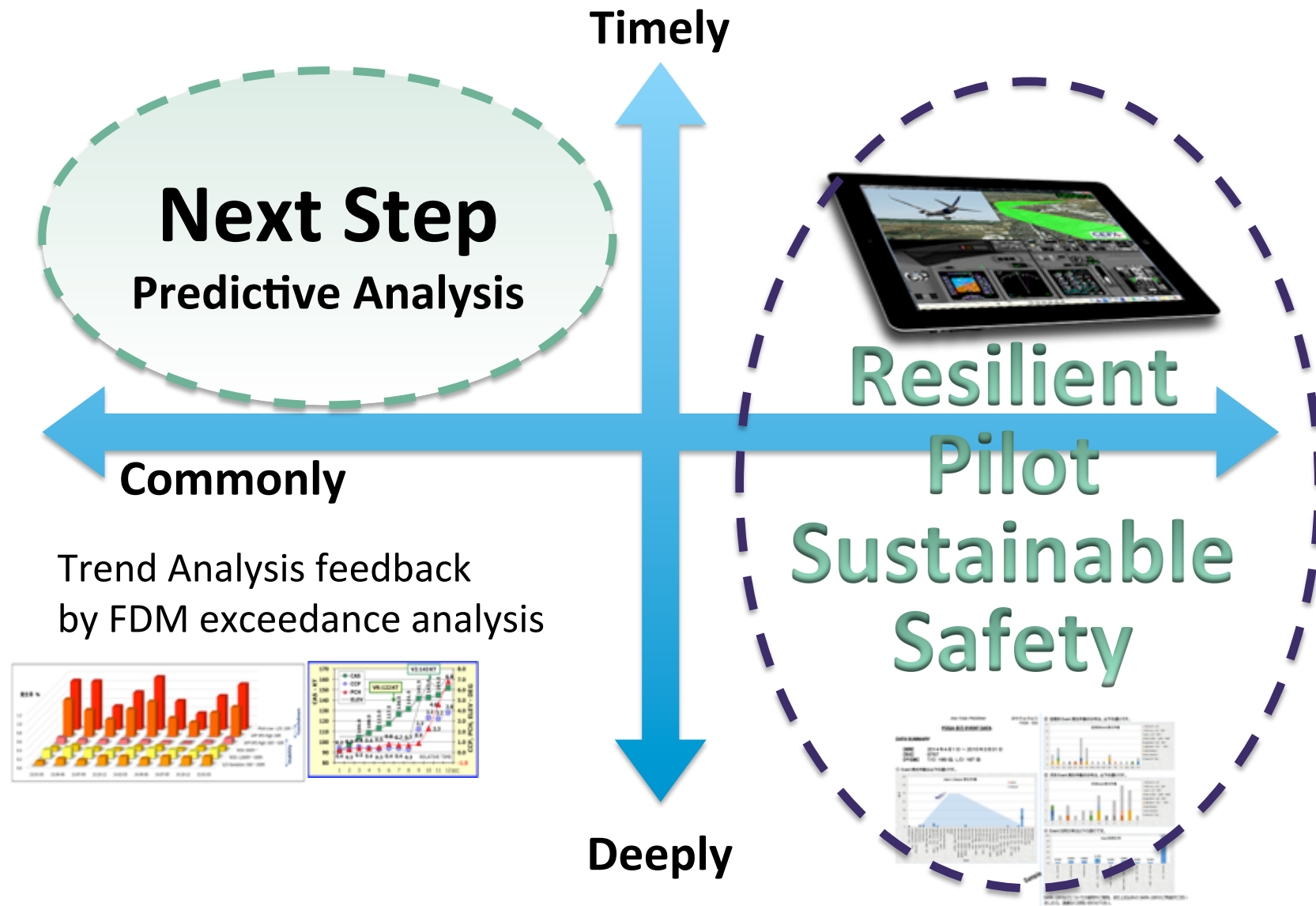
④ Event別発生率は以下の通りです。



Key Concept



Key Concept



Conclusion

✈ BACKGROUND

- ANA envisions a world where each ANA pilot explores safety and improve his/her skills
- Timely & individually approach contribute to safety improvement from the bottom up

✈ FURIKAERI

- Just after doors open, every pilot is able to look back into own Furikaeri animation
- Majority of the pilots find it useful for improving their skills
- Furikaeri karte also contributes to identify own trends

✈ SUSTAINABILITY AND RESILIENCE

- Furikaeri contributes to resilient pilots and sustainable safety improvement



Thank you for your attention.